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Abstract

Industrial relations theory has produced two conflicting hypotheses on the effects of multi-unionism on the incidence of industrial conflict. International comparative research proposes that unions organizing the same worker domains are prone to competition, for which industrial conflict is used as a means of propaganda. British economic research claims that unions organizing substitutable workers cooperate and act as one union. This study argues that apparent cooperation is not always voluntary action but is sometimes the result of a loss of autonomy caused by competition and a lack of mobilization power. Micro-level data on industrial action are used to test hypotheses of the conditions for such involuntary participation in labor disputes.

Keywords

Collective bargaining, membership competition, negotiation, strikes, trade unions

Introduction

This study addresses a problem of labor unions competing for members in a situation of multi-unionism. “Multi-unionism” refers to situations in which

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more than one union represents employees in the collective bargaining process. Unlike in the United States, exclusive jurisdiction is exceptional in Europe (Visser, 1992), and unions commonly negotiate with employers simultaneously with other unions on the level of the sector as well as at the company level (Akkerman, 2008). The majority of the European Union member states have multiple labor union confederations, organizing members along political, religious, or occupational (status) lines (Eurofound, 2014). Even in the United Kingdom, Austria, Ireland, and Latvia—countries with just one union confederation—unaffiliated unions and union representation by several unions within the same confederation exist. Thus, multi-union bargaining is a common if not dominant feature of Western European industrial relations. Sometimes, these unions coordinate their bargaining activities, for instance, by setting joint wage demands and synchronizing the communication to their rank and file. Joining forces increases their bargaining power.

In this study, I focus on the interdependency of unions in collective bargaining, more specifically in calling a strike. Union interdependency exists for two reasons. First, a union may be dependent on the other union's *mobilization power*. For a successful strike, it is of vital importance to mobilize as many as workers as possible. While the mobilization of own members may already be difficult for a union in a single-union context, the mobilization of strikers is even more problematic if workers are divided among two or more unions. Therefore, some unions may depend on collaboration with other unions to ensure sufficient numbers of strikers to make credible threats or call successful strikes.

However, under some conditions, one's colleagues may also be competitors, vying with one another for workers to organize. Such *competition for members* is particularly present during looming industrial actions and constitutes the second reason for union interdependency: industrial action undertaken by one union may affect another union's membership when members defect to the union that organizes industrial action. Therefore, acting independent of one's competitor may be risky.

The interdependencies created by insufficient mobilization power and competition for members affect unions' autonomy in calling strikes and their decisions to call them alone or with other unions. I argue that under certain conditions, these interdependencies lead unions to involuntarily join the strikes of other unions. Using multinomial regression analysis and a data set of 89 Dutch unions' decisions to engage in industrial conflict nested in 28 collective bargaining negotiations, I test four hypotheses regarding the effect of mobilization interdependency and competition on the probability that unions will imitate their competitors. I find that competition between unions increases the probability of a joint strike when size differences—indicating

mobilization interdependency—increase. The results of this study contribute to our understanding of inter-union relations and their effects on industrial relations outcomes.

The problem of multi-unionism

Multi-unionism is associated with high economic costs. It elevates wages by leap-frogging wage claims, increases unemployment, and reduces productivity growth (Oswald, 1979; Pohjola, 1984). Above all, scholars of industrial relations have argued that union rivalry increases the frequency of industrial disputes. Two different mechanisms are held responsible for this: (a) unions' propagandistic use of strikes in their competition for members and (b) the diverging interests of unions, which create more and potentially contradictory bargaining claims that the employer may not be able to fulfill. The first mechanism is hypothesized by a large body of literature in the field of industrial relations and refers to the use of industrial conflict as a means of propaganda in the competition for members by unions sharing a domain of comparable workers (Akkerman, 2008; Battista, 1991; Galenson, 1940; Gitlow, 1952; Krislov, 1960; Lester, 1958; Stout, 1998; Webb and Webb, 1897). Although the mechanism is often suggested as a cause for industrial disputes, the empirical confirmation of the effect remains equivocal to date. Some countries with multi-unionism face relatively high levels of industrial disputes, whereas others have relatively low levels of industrial conflict. The second mechanism refers to the bidding up of bargaining claims of unions representing the distinct workers of one employer. This mechanism is supported by sector-level studies for the United Kingdom (Dobson, 1997; Gall, 1994; Ingram et al., 1993; Machin et al., 1993) and several continental European countries (Akkerman, 2008).

Horn and Wolinsky (1988) relate the effects of multi-unionism to bargaining structure. Their claim is not that multi-unionism per se raises wages and increases the incidence of disputes, but rather whether unions engage in joint bargaining or separate bargaining. The choice between these options comes down to the substitutability of workers. When workers have more in common, such as skills, they are more easily substituted during strikes. This weakens unions' bargaining position because their members can be quickly replaced during a strike by members of other unions not on strike or by employees who are not union members. It would therefore be rational for unions that represent similar workers to join forces and act as one during collective bargaining. Thus, according to Horn and Wolinsky (1988), unions sharing the same domain of workers should cooperate and engage in joint bargaining instead of separate bargaining. Research on multi-unionism in Britain supports the hypothesis that joint bargaining equals single-union

bargaining in its effects, both on wages and labor disputes (Bryson, 2005; Machin et al., 1993), and concludes that unions that bargain simultaneously in one bargaining unit act as a single actor. This finding suggests that competition for members does *not* affect bargaining outcomes, either because competition does not exist or because rival unions can set their competitiveness aside during bargaining.

However, there are at least three reasons to question this conclusion. First, the absence of higher strike activity does not necessarily mean that union competition does not affect bargaining outcome or the level of industrial disputes. The only thing that can be concluded is that competition is not necessarily expressed by higher strike activity. Second, there is more conflict expression in industrial relations than strikes alone. Particularly in multi-union bargaining settings where a union's individual bargaining power is relatively small, we should pay attention to other expressions of conflict, such as rallies, picket lines, work-to-rule, and so forth. Each of these forms of industrial conflict is widely used in practice but they are wrongly ignored in the field of industrial relations. Third and foremost, the conclusion that unions in joint bargaining act as one unified actor may be a faulty interpretation of observed similarities in strategies. Joint strategies toward the employer (of either industrial action or conciliation) may be the result of cooperation and solidarity (Horn and Wolinsky, 1988; Jun, 1989; Walsh, 1994). However, joint strategies may also be the result of involuntary imitation of one's competitors due to a loss of autonomy caused by interdependency of choices for the unions involved. These interdependencies derive from two conditions: (a) potential dependency on a rival's mobilization power: depending on their own share of members, unions may depend on their colleagues' membership for industrial action to be successful (I label this *mobilization dependence*), and (b) dependency created by the potential and anticipated impact of strikes on membership numbers. Industrial action on the part of one union may affect the other union's membership, such as when members defect to the union that calls for industrial action. Walsh (1994) labels this situation *competitive interdependence*.

Condition 1: Splits in bargaining power

A union's membership is considered the most important determinant of its bargaining power (Britt and Galle, 1972; Martin, 1992). The higher the number of employees who are members of the union, the more workers a union can call for a strike. Although the actual "quota" of strikers who are necessary for a strike to be successful varies with the bargaining context, it is safe to assume that the chances of success increase with the number of

strikers. Generally speaking, the more workers who participate in a strike, the more the production process is disrupted, posing higher costs to the employer. A union's capability to call a serious strike is therefore considered its most important asset during bargaining. Under single-union bargaining that is common in the United States, the union's bargaining power depends on the share of employees who are members of the union. If this single union calls a strike, it calls on *all* of the employees who are union members to strike. There is no other union whose members break the strike, that is, substitute the strikers or take over their work during and after the strike.

Under multi-union bargaining, however, members are divided over two or more unions (Akkerman et al., 1995; Horn and Wolinsky, 1988; Walsh, 1994). Keeping total membership constant, calling a solitary strike constitutes a higher risk of not meeting the quota of members for winning a strike for unions under multi-unionism. Because of their fragmented bargaining power, strikes of unions under multi-unionism are subject to potential strike-breaking by other unions. Thus, multi-unionism reduces the expected utility of industrial action for unions *unless* the unions act in concert and call a joint strike. The sharing of (potential) membership thus creates mobilization dependence between unions. Assuming that cooperation involves transaction costs, this reasoning leads to the prediction that multi-unionism reduces rather than increases the incidence of industrial action (Horn and Wolinsky, 1988), thus contradicting the current hypotheses on multi-unionism. However, for now, the most important conclusion is that multi-unionism creates mobilization dependence between unions.

Condition 2: Overlapping membership characteristics

The second condition that creates interdependence is overlapping membership. When two trade unions (aim to) represent distinct workers, their substitutability is small, and the danger of members defecting from one union to the other is small. Union divisions along distinct religious, political, or occupational lines mean there is less scope for members to change unions than when unions represent similar groups of employees. However, for many unions, membership is not absolutely distinct but overlaps in certain or all characteristics (cf. Horn and Wolinsky's substitutability). It is my contention that the larger the overlap in membership characteristics (from now labeled overlap) of unions, the larger the probability of members defecting from one union to the other. Overlap between union memberships does not necessarily lead members to switch sides, but if an occasion arises, members may defect. Industrial action by one of the unions is just such an occasion (Walsh, 1994).

Gaining and losing members due to a strike. An important assumption underlying the idea that unions use strikes or strike threats as a means of propaganda is that workers are willing to join a union or even change unions during a (looming) strike. Members switching from one union to another is so common that a term for such switching exists: “spoils of war” (see, for instance, Akkerman, 2000). An explanation of the rationale for workers to join or switch to a union on strike requires a temporary shift from the union perspective to the perspective of employees. Mobilization research generally agrees that the presence of a complaint or a feeling of injustice is a precondition for people to join protest and social movements, such as trade unions (Jenkins and Klandermans, 1995; Klandermans, 1984). When an individual considers the gains of union membership to outweigh the cost of membership, it is likely that an individual will join a union. Membership fees are direct costs of joining a union, whereas representation in collective bargaining, legal advice and protection, and a strike benefit during strikes are benefits of union membership. In addition, social costs and benefits, such as disapproval or support by others, such as family, colleagues, and supervisors, are part of this cost–benefit calculation (Klandermans, 1984). A looming strike may urge a worker to rebalance the social costs and benefits, such as social support of colleagues (who approve of membership) or the social disapproval of, for instance, the supervisor (who disapproves of union membership). It is plausible that a strike or even a looming conflict with an employer is an occasion during which such costs and benefits proliferate. First, during a (looming) strike, workers’ discontent with their working conditions or the way the employer treats them is higher or at least more visible than under normal circumstances. This can be the case when the conflict is the direct result of problems between the workers and the employer or when the employer declines the demands of the union during regular contract negotiations. Workers who want to protest unsatisfactory conditions by way of a strike will lose income, which makes them dependent on the strike fund of a union. Because unions usually restrict their strike benefits to union members, workers have a strong financial incentive to join a union during (or just before) a strike. Moreover, strikes are situations in which solidarity among workers is important to making a strike successful. Social pressure via norms to participate in the strike exercised by co-workers is a well-known phenomenon (Coleman, 1994; Francis, 1985; Getman, 1999; Thommes and Akkerman, 2013; Thommes et al., 2014). Once convinced or pressured by their colleagues to participate in a strike, workers are morally or financially forced to join the union that calls the strike. Thus, during a (looming) strike, unorganized workers are more likely to become union

members than under normal circumstances. Moreover, those workers already organized may reconsider their membership if their union does not call a strike, and switch to a union that does support the strike. *If unions overlap, members may defect to a union calling a strike (assumption 1).*

Although there is a strong incentive to join a union that calls a strike (and pays strike benefits), employees will only benefit from the strike in which they participate when it is successful. That is, when it leads to improved employment conditions. Having participated in an unsuccessful strike is likely to be conceived as a senseless and costly adventure for which the initiator, that is, the union, will be held responsible. Particularly when the lost strike is called by a single union, other less risk-taking unions may become attractive alternatives. Thus, while strikes serve as opportunities to recruit union members, calling an unsuccessful strike may cost union members. *If union membership overlaps, an unsuccessful strike may cause members to defect from the striking union to the union that is not on strike (assumption 2).*

From the union's perspective, which depends on its membership for its organizational survival, it is important to anticipate the consequences of calling a strike in terms of membership gains and losses. A union's decision to refrain from joining the strike of a competitor may cause severe membership losses. Calling an unsuccessful solidarity strike is also associated with a risk of losing union members.

The next section will discuss how overlaps in union membership affect a union's decisions to call for industrial action, why such decisions also depend on the decisions of their competitors, and how mobilization dependence interacts with competitive dependence.

Joint or solitary strategies

A union that bargains in a multi-union bargaining situation in which a dispute with the employer arises has two options: (a) cooperate with the other union(s), as Horn and Wolinsky (1988) suggest they will or (b) follow a solitary strategy. When unions cooperate, the chances of winning a dispute change, most often to their advantage. When trade unions in multi-union bargaining cooperate, they are, *ceteris paribus*, as powerful as a single trade union that bargains with the employer exclusively. Their cooperation compensates for their weakened position caused by their restricted mobilization power. Cooperation increases the chances of successfully calling for industrial action and forcing the employer to fulfill unions' demands. If the chances of success were the only consideration for a joint strategy, an

alliance would be the only rational course of action, precisely as suggested by Horn and Wolinsky (1988).

However, unions may represent different interests, resulting in diverging bargaining claims. Particularly when unions organize (partly) distinct groups of employees, they are more likely to differ in their appreciation of the employer's final offer. Unions may therefore differ in substantive incentives for industrial action. Thus, cooperation between unions, let alone behaving as unified actors, is not a universal strategy. As in political party coalition formation, union coalitions involve coordination costs (Axelrod, 1970; De Swaan, 1973), which increase as the participants' substantive differences regarding bargaining grow. Once an alliance is established, the problem of coordination continues during industrial action because the coalition may easily fracture. A union with few or moderate claims will be more easily satisfied by a peace offering from the employer than will its ally with more or higher claims (Axelrod, 1970; De Swaan, 1973), and may therefore leave its ally during industrial action. Such a fractured coalition endangers the success of the union that continues its battle with the employer. Thus, the chance for a joint strategy between two unions decreases as the difference in substantive incentives increases: the larger the differences in substantive incentives between potential allies, the larger the costs of such an alliance, in particular, of a strike alliance. Although joint strike strategies can reflect similarities in interests and result from deliberate and voluntary cooperation, I demonstrate that joint strategies can also be the result of "forced cooperation" due to (a) membership competition and (b) asymmetric mobilization dependency.

I assume that a greater overlap between two unions will increase the potential for membership changes between these unions because workers can easily switch between overlapping unions. Thus, the risk of membership loss associated with deviating from a rival union's strategy is larger when the overlap with its rival is greater. A joint strategy with a competitor (either a joint strike or a joint peaceful strategy) is the only certain strategy for preventing membership loss to this particular competitor. In fact, the above follows from assumptions 1 and 2 and can be summarized in a third assumption: *Deviating from a rival union increases the risk of losing members (assumption 3).*

The incentive to not deviate from a rival union's decision to call a strike can mean that a union engages in industrial action even though it would not have on the basis of its substantive incentives. In fact, I assume that a union wants to prevent membership loss at any time and prioritizes its own survival above the interest of its members.¹ *Keeping members is more important than improving labor conditions (assumption 4).*

Of course, competition due to overlap can discourage a union from industrial action regardless of its dissatisfaction with the bargaining results. This may be the result when, for example, a union fears an unintended solo battle with the employer and expects to lose members to its competitor due to unsuccessful industrial action.

Which of the competing unions will be able to make the first move, that is, decide whether to engage in industrial action? Who imitates whom? According to Cohn (1993), the size of a union, based on the number of members, is relevant to the question of which union can afford the first move. The dominant union, that is, the union that organizes the most workers, will enjoy several important advantages when negotiating with the employer. First, the employer may reach an agreement with just one of the unions. Although this does not necessarily have to be the dominant union, it is generally more likely that the employer will strike a bargain that yields as many employees as possible. Moreover, an agreement without the dominant union will produce more potential opposition to the agreement. Obviously, the relevance of this first advantage will depend on the juridical arrangements under which the bargaining takes place and may differ between countries. However, the second and third advantages are strategic and depend less on local bargaining regimes. Asymmetric interdependence works to the advantage of the dominant union. It is less dependent on its smaller rival for mobilizing the quota of employees for industrial action than the smaller rival is dependent on the larger union (Cohn, 1993: 13). This makes it easier for the dominant union to take the initiative. *A union dominating in size has a first mover advantage (assumption 5).*

Finally, related to the former advantage, the potential costs of a broken alliance are smaller for a dominant union than for a small union. The dominant union is more likely to continue industrial action when the smaller union withdraws and to still be successful than vice versa. *Larger unions have a higher probability of winning a solitary strike (assumption 6).*

For a small union, continuing its protest alone will most likely not make sense because the small proportion of employees it represents may be easily replaced by members of the dominant union. *Smaller unions are less likely to win a solitary strike (assumption 7).*

Summing up, the assumptions made (in the order they appeared in the text) are the following:

1. If unions overlap, members may defect to a union calling a strike.
2. If union membership overlaps, an unsuccessful strike may cause members to defect from the striking union to the union that is not on strike;
(thus)

- 3. Deviating from a rival union increases the risk of losing members.
- 4. Keeping members is more important than improving labor conditions.
- 5. A union dominating in size has a first mover advantage (because)
- 6. Larger unions have a higher probability of winning a solitary strike.
- 7. Smaller unions are less likely to win a solitary strike.

With the aid of payoff matrices depicting two unions’ payoffs for outcomes of the interdependent choice to strike, I will show that when these assumptions hold, we can expect forced joint strategies between unions. Figure 1 depicts the outcomes of the four possible outcomes, resulting from both unions’ decisions to call a strike or not.

Figure 2 depicts situation A in which the larger union has a *high incentive to change labor conditions* through a strike, *whereas the smaller union does not*. Figure 3 presents situation B in which the larger union has *no incentive to change labor conditions* through a strike, *whereas the smaller union does*.

Situation A. The large union wants to change labor conditions.

Figure 2 shows that, for the large union, going on strike is the dominant strategy because it has a first mover advantage (assumption 6). The rational

		Small Union	
		Strike	No strike
Large Union	Strike	LCAΔ; M LU +; M SU-	LCAΔ; M LU +; M SU-
	No strike	M LU +; M SU-	SQ

Figure 1. Outcomes of interdependent choice to strike under asymmetric mobilization interdependency and competition.
LCAΔ: change in labor conditions; M LU: membership gain for large union, M SU-: membership loss for smaller union; SQ: status quo (with respect to both labor conditions and membership).

		Small Union	
		Strike	No strike
Large Union	Strike	3,3	4,1
	No strike	2,2	1,4

Figure 2. Payoffs for unions facing asymmetric mobilization interdependency and competition in a situation in which Large Union wants to change labor conditions.

response for the smaller union is also going on strike because doing so will prevent membership loss. Refraining from striking would mean losing members to the larger union and not prevent unwanted changes in labor conditions.

Situation B. The larger union has no incentive to change labor conditions through a strike, whereas small union does have an incentive.

		Small Union	
		Strike	No strike
Large Union	Strike	1,4	2,3
	No strike	4,1	3,2

Figure 3. Payoffs for unions facing asymmetric mobilization interdependency and competition in a situation in which the large union does not want to change labor conditions.

Figure 3 shows that when there is no incentive for the large union to go on strike, the dominant strategy for the large union is not to go on strike (assumption 6). The rational response for small union is also not going on strike because this will prevent membership loss. Going on strike would mean losing the strike (assumption 7) and, as a result, losing members to large union (assumption 2) while still not attaining changes in labor conditions.

Hypotheses

Based on the above assumptions, I expect that the probability of forced cooperation increases with the level of overlap between unions: *the greater the overlap a union has with the other union, the higher the probability of a joint strategy with that union* (Hypothesis 1).

Moreover, I expect such forced cooperation to be more likely when unions differ more in size because this decreases the changes for the smaller union to opt for the autonomous strategy, meaning that *the probability of a joint strategy with the other union increases with size differences between the unions* (Hypothesis 2). In addition, I expect an interaction effect between the size of the dominant union and the overlap with this union because the incentive to imitate the dominant union will be stronger when the overlap with this dominant union is larger because potential membership loss due to a solitary strategy—carrying larger risks of being unsuccessful—will increase when overlap is greater. I therefore expect that *the larger a union’s*

competitor is in size, the larger the effect of overlap will be on the probability of a joint strategy with this competitor (Hypothesis 3).

Obviously, a joint strategy by unions can also result from cooperation for substantive reasons, that is, when they have similar incentives to go on strike (or to refrain from striking). I will therefore control my analyses for an alternative hypothesis, stating that

The greater the similarities in substantive reasons for a strike that a union has with its competitor, the higher the probability of a joint strategy with that competitor (Hypothesis 4).

Data and methodology

The hypotheses in this study involve micro-level decision making and must therefore be tested on the level at which union decision making takes place (Gramm, 1986; Tracy, 1987; Wheeler, 1984). Data sets on micro-level motives and behavior of unions large enough to apply advanced statistics are not readily available. Moreover, the hypotheses predict both peaceful and conflict strategies. Therefore, a comparative case study sampling method was most appropriate. I pooled two data sets of collective bargaining negotiations. The first set of collective bargaining negotiations was randomly selected from the list of regular collective bargaining agreements, as recorded by the Dutch Department of Social Affairs and Employment, which includes all of the collective bargaining agreements in The Netherlands. To ensure a reasonable number of disputes, a second data set was created following a different sampling method. For this second sample, the population of collective bargaining negotiations with industrial disputes was determined by extensive media screening in the period between May 1995 and May 1997. During this 2-year period, 36 labor disputes during collective bargaining were reported by the national media, of which the 14 latest were selected to reduce the recall biases. After the sampling of the negotiations, the participating unions and their choices of whether to call for industrial action were identified. The final sample consists of 88 unions: 36 unions that engaged in any form of industrial action during the specified period and 52 unions that had not engaged in such action. The total sample included 28 collective bargaining negotiations, 16 of which witnessed conflict. In both sets, the collective agreements expired between October 1996 and December 1997. I did not select on bargaining level. Data for these collective bargaining negotiations were gathered by interviewing negotiators from two different unions and extensive document analyses, such as formal correspondence between employers and unions, and the minutes of meetings. A more detailed account of specific data gathering is given in the sections "Dependent variables" and

"Independent variables." Table 1 shows the selected collective agreement negotiated, the number of unions involved in the negotiations, and the conflict and bargaining levels.

Data structure

The hypotheses concern the probability of union *i* engaging in a joint strategy with union *j*. The probability of joint (action) strategy is measured on the level of *unique* union pairs. This variable was created by determining for each union in the collective bargaining whether it employed a similar strategy to that of *each other union* in the collective bargaining. This resulted in a dichotomized variable in which union *i* applied the same strategy as union *j* (1) or not (0).

For example, in the negotiations for the metal workers' three unions, union *a*, union *b*, and union *c*, participated, of which two called for industrial action, thus employing a similar strategy, and one did not call for industrial action, thus employing a solitary strategy. To test whether their choices to engage in conflict or not are affected by the characteristics of the other unions in the collective bargaining, the data were structured according to unique pairs of unions within the collective bargaining. In the example of the metal workers, each of the three unions is present in two pairs. For union *a*, union *a*–union *b*; union *a*–union *c*. For union *b*, union *b*–union *a*; union *b*–union *c*. For union *c*, union *c*–union *a*; union *c*–union *b*. Thus, the data set contains 214 cases, representing individual unions paired with every other union in the negotiation.

Dependent variables

I test the hypotheses with a multinomial dependent variable in which I distinguish between (a) joint industrial action and (b) a joint peaceful alliance opposed to a solitary strategy (0).

To construct this dependent variable, each union's involvement in industrial action was determined. A union's involvement in industrial action is a dichotomized measure, indicating whether a union was involved in industrial action (1) or not (0). Industrial action in this study is not restricted to strikes but is defined as a broad range of possible action intended to force the employer to give in to unions' demands.² The data on the involvement of unions in industrial conflict were obtained from documents (e.g. the official and legally mandatory letters of strike announcement to the employer in which unions announce industrial action) and media reports. This information was verified with interviews with union representatives. After having determined each union's involvement in industrial action, I constructed the

Table 1. Selected collective agreement negotiations.

Collective agreement negotiations with industrial action			Collective agreement negotiations without industrial action	
Collective agreement for	Number of unions (in action)	Type of industrial action	Collective agreement for	Number of unions
A food company (C)	4(3)	Wildcat strike later acknowledged by unions	A manufacturing company (C)	2
Health insurance companies (S)	3(1)	Strike threat	A railway infrastructure company (C)	2
Broadcasting (S)	4(4)	Strike threat	Foto-finishing industry (S)	2
Education (S)	4(2)	Refusal to sign contract	Airline ground crew (C)	4
Public libraries (S)	2(2)	Work stoppages	A telecommunications company (C)	3
Electronics company (C)	4(2)	Strike threat, demonstrations, refusal to sign agreement	National housing association (S)	3
A food company (C)	4(3)	Strike threat	Utilities (water, energy, etc.) (S)	4
Police (S)	4(4)	Strike	Oil storage company (C)	3
Hospitals (S)	4(1)	Demonstrations, refusal to sign agreement	Dental technicians (C)	3
Probation officers (S)	2(2)	Work stoppage	Temporary agency staff (C)	3
Metal-producing industry (S)	4(2)	Strike threat	Haulage industry (S)	2
Supermarkets (S)	2(2)	Strikes	A logistics company (C)	3
Horticulture (S)	2(2)	Abolish bi-partite consultative body		
Metalworkers (S)	3(2)	Strike threat		
Department store chain (C)	4(2)	Strike threat		
Railways (C)	4(3)	Strike threat		

C: company collective bargaining; S: sector-level bargaining.

ultimate dependent, multinomial variable by comparing the strategy of union *i* with that of union *j*: if both were involved in industrial action, this was valued (1). If neither was involved in industrial action, this was valued (2), and the cases in which union *i* was involved while union *j* was not, and vice versa, were valued (0).

Independent variables

Data on the independent variables were obtained by interviewing union negotiators who took part in particular collective bargaining processes. For each of the collective bargaining processes, negotiators from two unions were interviewed. If more than two unions had participated in the negotiation, the respondents were selected randomly unless the unions had been in conflict with each other publicly. In such cases, the representatives of the two conflicting unions were interviewed. By interviewing negotiators from two different unions, it was possible to gather data from different perspectives and to verify any contradictory information resulting from potential post hoc reasoning and recall bias. The first of the 57 interviews was conducted in August 1996, the last in March 1998, applying an order in which earlier negotiations were interviewed for first. The interviews were conducted at the union office, lasted at least 60 minutes and were all conducted by me. Some documents, such as correspondence and minutes, were obtained before the interviews, while other material, such as occasional bargaining logs and diary fragments, were obtained during or after the interviews. Thus, recall problems and post hoc interpretations were minimized. It is important to note that in the Dutch bargaining context, formal correspondence is a source of important information. Before starting the negotiations, each union sends formal correspondence in which it states its bargaining claims. I made extensive use of these documents to reconstruct the bargaining issues of each party.

The interviews were highly structured and completely standardized, containing mainly questions that requested quantified information about the bargaining issues with the employer and characteristics of the unions and their membership. If permitted, the interviews were audio recorded. The response after an introductory letter explaining the purpose of the interview and a phone call was high: only one negotiator refused cooperation, resulting in the selection of another collective bargaining negotiation.

Substantive difference

To measure the effect of competition on industrial action, the effect of competition must be distinguished from substantive reasons for a strike. The isolation of substantive reasons for a strike from competition for members

requires objective evaluation of the extent to which bargaining parties are unable to reach an agreement that results in an impasse. While simply asking negotiators to identify and quantify the degree of substantive reasons for calling a strike would most likely not provide an objective and unbiased measure, I made use of a computer-aided simulation model developed by Bueno de Mesquita et al. (1985; Bueno de Mesquita and Stokman, 1994) that simulates negotiations on the basis of the actual bargaining issues, the salience parties attached to these respective issues and power relations. This expected utility-based model has found a wide range of applications in decision-making analyses, including collective bargaining (Rojer, 1999).

The input data for this simulation were obtained through a careful reconstruction of all of the collective bargaining issues, each party's preferred outcome on these issues, the salience each party attached to each of these issues, and the parties' respective bargaining power. This reconstruction was performed with help of the interviewed negotiators. To isolate the "pure" substantive incentives for each party for an eventual action, the bargaining was simulated on the basis of these variables. By means of this computer-aided simulation, the number of unresolved issues for each bargaining party was obtained. This number was normalized for the total number of issues with which a bargaining party was involved. The idea of this indicator is that the lower the number of unresolved issues a union has, the less incentive it has to call for industrial action (e.g. a strike). This simulation and the data gathered for it are summarized in Appendix 1. For a more technical explanation, consult Achterkamp and Akkerman (2003). For the present data set, this predictor of substantive conflict for the individual union is positively associated with the probability of a union to call a strike, with a z value = 2.02 ($p < 0.05$) in a hierarchical model (unions nested in collective agreement negotiations), controlled for union membership rate.

The variable of *differences in substantive incentives* is defined as the differences in the number of remaining conflict issues with the employer between union i and union j in each negotiation. For example, union i is not able to compromise with the employer on six issues, whereas union j is not able to compromise with the employer on four issues. Thus, the difference in substantive incentive for calling a strike is two.

Competitor's size and size difference

Competitor's size is defined as the number of members union j represents in the company or sector who are covered by the particular collective agreement (before any potential extension to other firms in the sector) as a percentage of the total employees in the sector or company who are covered by the collective agreement. Information on membership rates was obtained

via the respondents and cross-checked with the unions' own official membership reports. *Size difference* between union *i* and union *j* is the difference between the size of union *i* and that of union *j*. For example, if union *i* represents 40% of the employees and union *j* 50%, the size difference between these unions is 10.

Overlap in membership

Overlap in membership is the number of members that may defect from union *i* to union *j* and vice versa. The overlap between two unions is not necessarily symmetric: When union *i* has a wider scope of membership than union *j*, union *i* may have a larger overlap with union *j* than vice versa. Although the theory does not make a distinction between the members a union can lose and the members a union can win from its competitor, I made such a distinction in the measurement of overlap for the purpose of validity. For a valid measure of overlap, the questionnaire distinguishes between "defensive" and "offensive" overlap. Defensive overlap refers to the percentage of members union *i* has the potential to lose, whereas offensive overlap refers to the percentage of members union *i* can gain from another union *j*, according to the union representatives responding to question 2 in Box 1 in Appendix 2. This question was repeated for every pair of unions in the collective bargaining process. The variable of overlap used in the analysis is the combination of defensive and offensive overlap, obtained by computing the defensive overlap and the offensive overlap and dividing it by the total employees covered by the collective agreement.

Note that with this measurement of overlap, I assume that (a) the overlap in membership between union *i* and union *j* weighs equally for both unions and (b) losing a certain number of members weighs equally with winning the same number of members.

Interaction overlap and size of the competitor

The interaction is the product term of the overlap between union *i* and union *j* with the size of union *j* computed after centering both predictors around the group mean, that is, the collective bargaining mean.

Description of the data

Table 2 shows several descriptive statistics of the variables used in the analyses.

Table 3 reports some univariate analyses that provide a description of the three values on the dependent variable. The table shows that the mean

combined size of union *i* and union *j* is significantly higher for the joint strike strategy compared with that mean of the unions who choose a solitary strategy or a joint peaceful strategy. This most likely reflects the importance of the number of workers (the “quota”) that must be mobilized for the strike. However, the mean size of the unions applying a solitary strategy, which is smaller than that of union pairs in a peaceful strategy, does not withhold some unions from striking on their own. Another important observation is that the differences in size are significantly larger for unions applying a joint action, whereas their substantive differences are significantly smaller, suggesting that cooperation in joint industrial action is more likely for unions that differ considerably in size while having similar levels of substantive conflict with the employer. Finally, the mean overlap with the competitor is considerably lower for unions that choose a solitary strategy than for unions that choose a joint strategy with union *j*, suggesting that overlap is associated with cooperation, both in joint action strategies and joint peaceful strategies. In the following section, I report on the multivariate test of the hypotheses, controlling for the embeddedness of unions within collective agreement negotiations.

Results

Joining forces enables unions to organize industrial action more successfully than they would on their own. These alliances are not necessarily consensual because unions can force competitors into a joint strategy. Table 4 presents the results of the multinomial logistic regression on the probabilities that union *i* applies the same strategy as its competitor union *j*. The table presents the results of the multinomial logistic regression in which joint strikes are distinguished from joint peaceful strategies. The reference category is a solitary strategy, that is, a deviation by union *i* from its competitor’s—union *j*’s—strategy. The robust standard errors are clustered on the collective agreement negotiation to control for the nested structure of the data: each union pair is nested in a collective agreement negotiation.

The results of the multinomial logistic regression presents the effects of the independent variables on (a) the probability that union *i* calls for industrial action when union *j* does and (b) the probability that union *i* will abstain from industrial action when union *j* abstains from industrial action.

The multinomial logistic regression produces an insignificant main effect of overlap, indicating that overlap with union *j* does not increase the likelihood of union *i* engaging in a joint industrial action with union *j*. This finding rejects Hypothesis 1. A significant positive effect is found for the differences in size between unions *i* and *j* ($B = 3.83$; $p < 0.1$). This indicates that unions are more likely to form strike coalitions when they differ in size,

Table 2. Descriptives of, and correlations between, the independent variables.

	Feature of	Mean	Standard deviation	Min-max	N (unions)	(1)	(2)	(3)	(4)	(5)	(6)
(1)	Overlap with union i	4.2	7.9	0-70.4	214	-					
(2)	Difference in substantive conflict union i - union j	0.07	0.12	0-60	214	-0.07	-				
(3)	Size Difference Union i - Union j	0.14	0.14	0-54	214	0.09	0.63	-			
(4)	Size union j	0.12	0.14	0-.55	214	0.39	0.001	0.51	-		
(5)	Size union j xOverlap union j	0.90	3.64	0-35.56	214	0.69	0.05	-0.11	0.15	-	-
(6)	Union i involved in industrial action	46%	-	0-1	214	0.06	-0.10	0.16	0.05	.14	-
(7)	Union j involved in industrial action	46%	-	0-1	214	0.07	-0.06	0.15	0.22	.11	.46
(8)	Same strategy	73%	-	0-1	214	0.14	-0.18	0.11	0.11	.09	-0.04
											-0.06

Table 3. Pair-wise t-test of differences in means by strategy.

What strategy	Solitary strategy	Same strategy		N (unions)
		Joint strike	Joint peace	
N number of pairs of unions	57	70	87	214
Combined size union pair	0.18	<0.31>	0.21	214
Substantive differences	0.11	>0.04<	0.07	214
Size differences	0.11	<0.18>	0.12	214
Overlap	2.41<<	5.74	4.14	214

In bold: mean values significantly (p values <0.05 or lower) differing from those in the other groups.

which increases mobilization interdependence, which in turn supports Hypothesis 2.

The interaction between the overlap with and the size of union *j* has a significant effect on the probability of joint action ($B = .55$; $p < 0.001$), meaning that when a union competes with a larger union, it is more likely to engage in a joint action strategy with this larger competitor rather than deviate from its competitor. This indicates that the effect of overlap increases with the size of a union's competitor, as predicted by Hypothesis 3.

The effects found for competition and mobilization interdependency on joint strategies hold even when controlled for the alternative explanation for cooperation: similarities in substantive conflict with the employer. For ease of interpretation, I use the inverse of similarities, that is, the difference in substantive conflict. The regression produces a significant negative effect for the size of the substantive differences between union *i* and union *j* ($B = -6.48$; $p < 0.1$), meaning that the likelihood of cooperation in a joint action increases when the substantive motives for a strike for both unions converge, which supports Hypothesis 4.

For predicting the probabilities of a joint peace as opposed to a solitary action of one of the unions in a union pair, none of the predictors are significant, including similarities in substantive conflict with the employer.

Conclusion

International comparative research suggests that unions compete for members, and that industrial action is an important tool of propaganda. Union

Table 4. Results of multinomial regression analyses.

Multinomial logistic regression, pairs of unions, rb standard errors clustered in collective bargaining negotiations		
Of which (ref. cat. is solitary action by union i)		
	Joint action	Joint peace
Substantive differences	-5.54 (3.52)	-6.48 (3.74)*
Overlap	0.06 (0.06)	-0.20 (0.70)
Size differences	3.24 (1.85)*	3.83 (2.06)*
Competitor's size	0.91 (1.59)	1.49 (1.69)
Overlap × Competitor's size		0.55 (0.13)****
Constant	-0.22 (0.68)	0.23 (0.69)
N	214 (127)	214 (144)
Collective Agreement	28	
Negotiation		
-2 LL	-231.93627; -218.67034; -213.55591	
Chi-square (df)	18.38036 (8)** (full model compared with intercept only model)	
Pseudo R ²	5, 11443 (2)* (full model compared with the model without interaction)	
	Model 1: 5.72% Model 2: 7.92%	

*p < 0.1, **p < 0.05, ***p < 0.01, and ****p < 0.001.

rivalry is held responsible for high strike activity. Empirically, the hypothesis of competing unions is still difficult to prove. Although this seems to be confirmed for several countries, important exceptions remain. British research into the effects of multi-unionism on bargaining outcomes and labor disputes suggests that it is not the presence of multi-unionism per se that is responsible for negative bargaining effects. Instead, researchers argue that the degree to which their membership overlaps determines the bargaining power of unions. Due to their weakened bargaining position, unions can join forces when their memberships overlap and will engage in single-table bargaining. As a result, researchers suggest, in multi-union single-table bargaining, unions act as one unified actor and therefore such bargaining equals single-union bargaining in its outcomes. Such a conclusion entirely obscures all notions of competition between unions for members.

I argue that this perhaps may hold for unions that are not competing for members, but that multi-union bargaining does indeed differ from single-union bargaining in two respects. First, multi-unions create mobilization dependence between unions, by which I mean that union depend on each other's membership to mobilize enough workers for a successful strike. Second, the representation of the same group of workers sometimes may provoke workers to substitute one union for the other. I argued that industrial conflict is an occasion in which workers may do so. This introduces the membership competition referred to by comparative research. I argue that union competition may lead to forced cooperation because smaller unions in particular may lose their autonomy to decide whether to engage in strikes or not. Elaborating on these conditions, I formulated four hypotheses on the effects of membership overlap, membership size differences and substantive differences on the probability of joint industrial action, and the probability of joint conciliatory strategies.

The empirical test of these hypotheses produced three important findings. First, controlling for similarities in substantive incentives, competition between unions does lower the autonomy of smaller unions and increases the probability that a small union will be forced into joining a strike when the size of its competitor increases. Second, when unions differ in size, the likelihood of a joint action, compared with a solitary strategy, becomes larger. This indicates the presence of mobilization dependence, which, as I argued in this article's section, leads smaller unions to abstain from solitary action strategies. Third, overlap as such increases the probability of neither joint action nor joint peaceful strategy. It is the combination of membership competition and mobilization dependency that leads to forced cooperation.

These results show that joint action is not always an indication of voluntary cooperation or union solidarity. On the contrary, union alliances in

action may be the result of the decisions of a single, more powerful union. For the union that is forced to follow the strategy of its competitor, the consequences for interest representation and autonomy are major. The economic effects of multi-union bargaining therefore depend more on the distribution of bargaining power than on substantive cooperation between unions, as suggested by previous studies (Bryson, 2005; Machin et al., 1993).

The results of the empirical tests thus also shed light on the question of why, in some countries and industrial sectors, a negative relationship exists between the number of trade unions and strike incidence. This study has shown that two conditions are relevant for this question: (a) the competition between unions and (b) mobilization dependency. In industrial sectors in which unions differ in size considerably and compete with one another, smaller unions lose the autonomy not to strike. Although satisfied with the outcome of bargaining, smaller trade unions will call industrial action because without an alliance with the largest trade union, they are bound to lose members to the largest trade union. The conclusion must be that under such circumstances, union competition does not necessarily affect the incidence of industrial action, but the size of strikes in terms of unions and union members participating in them, thereby increasing the economic costs for the employer and the members of smaller unions.

This study has important implications for the present weakened position of unions. In addition to attempts to gain presently unorganized workers, the findings of this study support unions' strategies to cooperate, for instance, by mergers. Smaller unions under multi-union bargaining that face a loss of autonomy with respect to their decision to call industrial action, can play a key role in reducing the effect of reduced overall membership. Obviously, such a merger would be contra-productive if the merger itself would result in membership loss, for instance, because its distinct membership does not feel represented by merger candidate. Otherwise, formalizing (forced) cooperation by merging with larger unions, for example, can prevent or at least postpone further weakening of union bargaining power (Chaison, 1996; Clark, 2013; Gumbrell-McCormick and Hyman, 2013).

Obviously, this study is not without its limitations. It studied a wide range of means of industrial conflict, such as strike threats and demonstrations. Although I deem it important that research into industrial conflict includes a broader scope of means of protest than strikes only, and that there is no theoretical reason to expect that unions' choices differ for distinct means of protest, a larger data set containing more actual strikes would allow for an analysis of different types of industrial conflict.

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Notes

1. How plausible is the claim that union leadership would prioritize membership above direct membership interest? Leading authors in industrial relations agree that unions do. According to Kochan (1980),

Unions leaders must be concerned for the long-run institutional survival and power of the union as an organization. This may cause leadership to depart from a simple aggregation of membership preferences and to put more emphasis on union security than individual members would prefer. (p. 172)

The leadership is at least able to misuse its inside knowledge about the negotiations. Ross and Irwin (1951) and Ashenfelter and Johnson (1969) were convinced that union leadership makes use of this leverage:

Regardless of strike votes and other formal procedures, the decision to strike is one for the leaders of the union to make. It is they who determine on behalf of the rank and file whether the employer's terms are acceptable, and it is they who decide whether to put in effect the familiar techniques of psychological mobilization. (Kochan, 1980: 337)

2. This varied between strikes, work stoppages, demonstrations, work-to-rule, and so on. At first glance, this allows for a more informative ordinal dependent variable in which a strike, in financial terms, is more costly and thus more severe than a picket line or a demonstration. The use of such a scale would imply the assumption of a (positive) correlation between competition and the severity of the means of industrial protest. It would suggest that the choice of protest by the trade union will depend on the degree of substantive conflict or on the level of its competition with other unions. Such an assumption would refer to punishment and revenge rather than to an efficient instrument for persuading the employer to give in or to compromise. Why call a costly strike when a mere demonstration may be sufficient to force the employer to yield, and the workers to join a union? Instead, I assume that a trade union will be economical in its use of industrial conflict and will not invest more in a protest than it deems necessary. This calculation depends, among others things, on the vulnerability of the employer to the different means of industrial conflict and varies between sectors and even employers. Applying an ordinal scale of industrial conflict for the purpose of this study would lead to an invalid comparison of means of protest between collective bargaining processes. In this regard, a dichotomized variable that indicates involvement in industrial conflict is more valid.

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Appendix I

Substantive incentive for industrial action

This variable was obtained through a computer simulation of the negotiation process by the Expected Utility Model of Bueno de Mesquita et al. (1985; Bueno de Mesquita and Stokman, 1994) which is used to model a variety of collective decision-making situations. Computer simulations with this model predict the outcomes of negotiations. I used these simulations as simplified reconstructions of the bargaining processes in which employers and trade unions negotiate over a set of bargaining issues. Each bargaining process simulation is based on five steps through which a collective decision is reached. In the Expected Utility Model, each party holds a preferred position on each bargaining issue. The main assumption is that an actor attempts to influence the positions of the other actors in such a way that the bargaining outcome more closely resembles its own preferred position. In the first step, the actors choose their preferred positions and the salience they attach to the bargaining issues. This determines their utility functions. The actors then obtain information about the preferred position and issue salience, in other words, the utility function of the other participants in the negotiation, to estimate the expected outcome for each bargaining issue. The Expected Utility Model assumes that actors calculate this expected outcome by the weighted median voter position of all actors on each issue. The actors then calculate the utility losses caused by these expected outcomes. The next two steps involve the actual bargaining. Actors attempt to influence one of the bargaining partners by persuading it to accept a change of voting position to obtain a collective outcome closer to its own preferred position. This persuasion is based on implicit threats to use power (e.g. by launching attacks, strikes, or industrial conflict) and involves differences in the bargaining power of the actors. In the fourth step, actors evaluate all of the proposals that they have received and accept the proposal that they expect will have the most positive (or least negative) effects on the collective outcome, and change their voting

positions according to these proposals. These steps in the negotiation process are repeated until no further change of position is possible given the respective positions, power, and issue saliences (=the importance of each issue relative to the other issues) of the parties. Then, the model predicts the collective outcome by calculating the final weighted median voter position (Achterkamp and Akkerman, 2003). For the simulation of the collective bargaining processes, I excluded this final step because a collective agreement is not made through a decision rule but is an individual decision by the unions and the employer about whether to accept the offer resulting from the bargaining process. For the construction of the substantive incentives of the unions, I used the final bargaining positions of each of the employers and compared them with those of each trade union. Because all issues were scaled on a one-dimensional scale and normalized, the positions on the issues ranged from 0 to 1. This means that the distances between the positions also lie between 0 and 1. A difference of 0 between the employer and union i on issue x means that the employer and union i agreed on issue x . I categorized an issue as a “conflict issue” if the distance on that issue was >0.1 on the normalized scale. For each union in a collective bargaining, I added together all of its conflict issues and divided this by its total number of bargaining issues to obtain the proportion of issues on which the union has not reached an agreement with the employer. In this way, the variable “substantive incentive” was constructed, which is, in fact, the proportion of issues for which the union has not reached an agreement with the employer. For a more technical explanation and testing of the instrument for establishing substantive incentives for industrial conflict, please refer to Achterkamp and Akkerman (2003).

Data for the bargaining simulation

The data required for this simulation were collected by means of a detailed quantitative reconstruction of every collective bargaining process. The first step was to establish the set of bargaining issues of each collective bargaining process. For this, I made use of the standard procedure in the Dutch collective bargaining process of distributing letters of demands and propositions among the bargaining parties. These letters provided a preliminary list of bargaining issues, which was checked and amended by the respondents. The next step was to construct a one-dimensional scale for each issue. The respondents were asked to identify the preferred position of its own organization and that of the other bargaining parties on all of the issue scales. The next step in the reconstruction of the bargaining process was to weight all of the issues by their importance or salience. The salience of the issues was quantified on a scale of 0 to 100 on which a score of 0 meant that the actor

was indifferent about the issue and a score of 100 meant that the issue was of extreme importance. Salience is a relative measure, which can only compare the issues between actors and has no absolute meaning. Again, the respondents were asked to do this for their own organization and for the other bargaining parties. The final step was the measurement of third actor characteristics, the bargaining power of each participant. The respondents were asked to identify the most powerful actor in the bargaining process, which was assigned a score of 100. The power of the other bargaining partners was then related to this most powerful actor. Here, a broad definition of power was used; all potential components of power were included in this variable. The most reported components were membership numbers (for unions), financial means to withstand a strike (for the employer), and the potential to obtain media attention.

Appendix 2

Box 1. Data gathering union substitutability.

Question on union substitutability

Some unions have a distinct membership, which strongly differs from that of that of other unions. For reasons of ideology, job level, and occupation, the members would never join another union. It is also possible that the membership of two (or more) unions have much in common. I would like to know how large the similarities are between the unions in this collective bargaining process. I will compare the unions in pairs. First I will ask you to identify the sorts of differences between the unions' members. You will then be asked to assess how many of union A's members may defect to union B quite easily, and vice versa. I would like you to express this in a number between 0 and 100. A score of 100 means that there are no differences between the unions and that all members of union A could easily join union B. A score of 0 means that none of union A's members would defect to union B.

The comparison between union A and union B.

a. What are the main differences between the members of union A and union B?†

b. How many members of union A could join union B?

None

All

0-----/-----100%

c. How many members of union B could join union A?

None

All

0-----/-----100%

†: The representatives were explicitly asked to answer all of questions regarding the situation before the first bargaining round.